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Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for detecting target cells in a patient comprising:
   a) marking target cells in ~~the body~~ a patient's gastrointestinal tract with a signal emitting substance, wherein the signal emitting substance has an affinity for a particular target cell type;
   b) directing a detector through ~~a naturally occurring body lumen in the patient~~ the patient's entire gastrointestinal tract to detect the signals as the detector passes through the patient's gastrointestinal tract; and
   c) differentiating between signals associated with target cells of the particular target cell type and signals associated with non target cells.

2. (currently amended) A method for detecting target cells in a patient comprising:
   a) administering to a patient a material comprising at least one signal emitting substance and at least one substance having an affinity for a particular target cell type, wherein the material is directed through the patient's gastrointestinal tract;
   b) providing a detector capable of detecting signals emitted by the signal emitting substance;
   c) directing the detector through the patient's entire gastrointestinal tract;
   d) detecting signals emitted by the signal emitting substance, wherein the signals are detected with the detector as the detector passes through the patient's gastrointestinal tract; and
   e) differentiating between signals associated with target cells of the particular target cell type and signals associated with non target cells.

3. (currently amended) A method comprising the steps of:
   a) administering to a patient a material capable of targeting and binding to a target cell type;

b) administering to the patient a clearing agent for removing a portion of the material that is not bound to the target cell type; ~~and~~

c) directing a detector through the patient's gastrointestinal tract to detect the target cell type;

d) tracking the position of the detector as it passes through the patient's gastrointestinal tract; and

e) providing a display, wherein the display indicates the detection of the target cell type as detected by the detector in relation to the associated position of the detector within the patient's gastrointestinal tract.

4. (previously presented) The method of Claim 1 wherein the signal emitting substance comprises a monoclonal antibody.

5. (previously presented) The method of Claim 1 wherein the substance comprises a peptide.

6. (previously presented) The method of Claim 1 wherein the substance comprises a nanoparticle.

7. (previously presented) The method of Claim 1 wherein the substance comprises a nucleotide sequence such as mRNA or DNA corresponding to a genetic material monoclonal antibody.

8. (previously presented) The method of Claim 1 wherein the substance comprises a liposome or liposome structure.

9. (previously presented) The method of Claim 1 wherein the step of differentiating comprises employing at least two different differentiator agents.

10. (previously presented) The method of Claim 1 wherein the step of differentiating comprises differentiating between at least two different radioactive isotopes.

11. (previously presented) The method of Claim 1 wherein the step of differentiating comprises comparing signals received from at least two different radioactive isotopes.

12. (previously presented) The method of Claim 1 comprising administering to the patient two different monoclonal antibodies, wherein the two different monoclonal antibodies are tagged with different radioactive markers.

13. (previously presented) The method of Claim 1 comprising directing at least two detectors through the GI tract of the patient.

14. (previously presented) The method of Claim 1 comprising the step of collimating the detected signals.

15. (previously presented) The method of Claim 1 comprising tracking the position of the detector.

16. (previously presented) The method of Claim 1, wherein the signal emitting substance comprises a combination of a first material configured to emit a signal and a second material configured to bind to the particular target cell type.

17. (previously presented) The method of Claim 16, wherein the second material is configured to bind to cancer cells.

18. (previously presented) The method of Claim 1, further comprising administering a probe signal, wherein the signal emitting substance is configured to provide a detectable signal in response to the probe signal.

19. (previously presented) The method of Claim 1, wherein the detector is housed within a swallowable capsule.

20. (previously presented) The method of Claim 1, further comprising tracking the position of the detector in the naturally occurring body lumen.